

Seventh  
National  
Automobile  
Show

# Madison Square Garden

This  
Week

## LEADS IN IMPORTATIONS

According to the Official Records at the Custom House, more new "FIAT" Automobiles have been imported into this country during 1906 than any other made.

Three years ago there were only two "FIAT" machines in this country.

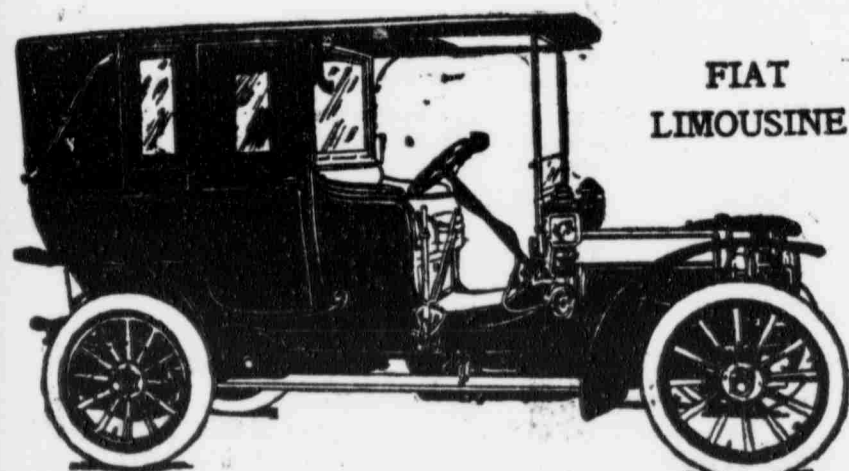
To-day it leads.

This remarkable showing has been made possible by its wonderfully consistent record

in all speed and endurance contests, its unequalled mechanical excellence, its absolute reliability, and the fact that behind every "FIAT" car, behind every statement and behind every guarantee has been The HOL-TAN Company, whose high reputation and standing are generally recognized.

"FIAT" Cars appeal to those who want the best.

All the 1907 models are now on exhibition at the Madison Square Garden show.



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We can now make IMMEDIATE DELIVERY of these famous Italian Cars in all models, with closed and open bodies, by the leading European and American designers.

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### BEGINNING OF THE AUTO.

SHROUDED IN MYSTERY EXTENDING OVER EVERY AGE.

Triumphal Car at Athens Before the Christian Era—Ark Driven by Fireworks in Sixteenth Century—A Steam Carriage Running on Legs Instead of Wheels.

Right now, when every one in the busy, big town, from the railroad president who has his private parlor car down to the pushcart proprietor, is affected by the automobile influenza, it is natural to reflect upon the almost magical development of the motor vehicle within a few years and to wonder where it will end.

With the continued improvement of pleasure vehicles, the successive advent of new forms of them and the definite promise of motor wagons and trucks becoming more and more economical until the horse is ultimately emancipated, no halting place can be discovered from the present prospect and the question wins obedience as a poser.

Turning from the inquiry into the future, the next question naturally arising at this time of turmoil over the mechanical gorgons is: "Where did it begin?" An attempt to answer this means real trouble, for every historian seems to have a different originator, native to his own country.

There are a number of living claimants to the inventor's crown, although several record keepers have awarded it to citizens who died a generation ago. Yet something must be written when every one who buys the paper wants to read about automobiles. Prophecy being mighty risky, too, it may be just as well to tackle the beginning and upgrowing of the motor car, as the subject is abundantly interesting.

In the broad sense of the term the self-moving vehicle appears to have existed in some or another form in every age, and search for the first one leads back into the dimmest pages of history. Mankind seems to have yearned for the automobile ever since domestic troubles first made swift travelling desirable. Some sort of a sledge that would bump down a side slope was probably the first form of an automoving carrier, aside from slaves and beasts of burden. It has been cited by the scholastic Socrates of the motor clubs that the automobile was introduced as a war machine several centuries ago, when some of the gentle warriors of classic times filled a wheeled box full of stones and launched it down hill into the ranks of the enemy.

From prehistoric times the idea of eliminating the horse and donkey as hauling powers took possession of imaginative minds, and the horseless carriage was a recurring dream which at various times found more or less definite expression on paper, though not in fact. It has been said that the motor car is an evolution from the bicycle, but this is a careless way of putting it, to say the least.

The fact is that the desire to get rid of draught animals and produce an automatic wagon came first of all, and the primary

products of it were manumotive vehicles, from which the dandy horse, the velocipede and the modern bicycle were developed. Considering this, it may be accepted that the automobile was not evolved through the bicycle, that neither is the automobile the father of the manumotive vehicle, but that the automobile idea is the parent of both. The bicycle was the first fruition of the thought and striving, that is all.

A road vehicle propelled from within appears to have actually existed before the Christian era dawned, for in "The Ethiopics" Herodotus refers to a triumphal car at Athens that was "moved along by men carried therein." Pausanias also mentions these chariots. A Chinese contrivance with wheels that was pushed along by poles and others that were rowed on land are recorded as wonders in the sixth or seventh century.

Certain it is that the automobile is not of the mushroom growth that many accord it with being, but that it has been a true product of evolution. Also, it is apparently certain that the real self-moving vehicle, actuated by mechanical power, was successfully demonstrated before the steam railway car. The commercially practical motor car has been a thing of rapid development within the last decade, but motor driven vehicles for road use that were practical in that they were capable of travelling and dirigible, date back to the eighteenth century, while during the seventeenth century wagons driven by spring power and by sails were employed in Germany and the Netherlands.

It even seems possible that there was in Turkey a genuine automobile driven by explosive power, though not of a practical sort, as long ago as 1585, for Edward Webb, an English writer of travels, describes a cunning piece of fireworks, framed like an ark, that carried forty men within it and was driven by "thirteen thousand several pieces of fire works."

Prophesies of the motor car and explicit forecasts of it there were in plenty. In the thirteenth century Friar Roger Bacon (1214-1294) declared that it would yet be possible to make wagons go without horses and not long after Leonardo da Vinci (1452-1519) made a sketch of a gearing for a self-moving carriage, which he declared was practicable, but which he did not demonstrate.

In 1625 a petition was filed in England by John Marshall for "a new invention of a cart of 15 cwt., to carry a great burden without help of horses and guided but by himself." Letters patent dated October 10, 1644, were granted by Louis XIV. to Jean Thevenot for "the privilege of employing a little four wheel carriage, set in motion without any horses, but merely by two men seated."

The second century steam engine of Hero was employed in the seventeenth century for a toy steam wagon made by Verbiest, a missionary in China, and Sir Isaac Newton is reported to have used the same idea, a kettle with the spout turned rearward and provided with a single

steam jet apparatus somewhat similar to contemporary steam toys.

About 1740 Bishop Berkeley of England made the prediction: "Mark me, ere long we shall see a pan of coals brought to use in place of a feed of oats," but he did not do anything to hasten the day thereof.

Toward the end of the seventeenth century Eli Richard, a physician of La Rochelle, invented a successful pedemotive carriage and used it in Paris, a servant in a rear box doing the work, while the doctor sat in front and steered by means of cords attached to a crossbar over the front wheels. The driving gear was arranged on the pawl and ratchet principle.

James Watt was urged to build a steam chariot as early as 1765. The advocate of this was Dr. Erasmus Darwin, who appears to have had considerable enthusiasm on the subject. Dr. Darwin's faith in the use of motors for airships, as well as carriages, is quite plainly indicated in his poem, "The Botanic Garden," in which he wrote:

Soon shall thy arm, unconquered steam, afar Drag the slow barge or drive the rapid car; Or, on wide waving wings, expanded, bear The flying chariot through the field of air; Fair crews, triumphant, leaning from above, Shall wave their fluttering kerchiefs as they move.

Or warrior bands alarm the gaping crowds, And armies shrink beneath the shadowy clouds.

Watt did not heed the counsel of Darwin at the time, but in 1782 he patented a double acting engine, which he thought "might be employed to give motion to wheel carriages." Before this, in 1768, a Frenchman, Nicholas Joseph Cugnot, invented what is most generally conceded to be the first steam automobile. This was a trolley vehicle, built with state funds, and in the following year he built a second one, showing improvements, which was exhibited at the Tuileries in 1780. This contrivance was fatally defective in that it had only a single wheel for both driving and steering. Watt did not put his patent to the trial, but other British experts took up the subject, and for more than fifty years, well into the nineteenth century, there was remarkable activity in the building of steam carriages in both Europe and America.

George Stephenson, Richard Trevithick, Walter Hancock, Goldsworthy Gurney, David Gordon, William Brunton and others were the leaders of the movement in England, while in the United States steam vehicles were brought out by Oliver Evans, Nathan Reed, Thomas Blanchard and others. Reed produced his carriage in 1789, and it was more practical than that of Cugnot. Oliver Evans obtained in 1787 the right to operate steam road wagons in Pennsylvania and Maryland, and in 1805 built a combined road wagon and boat.

The first notable improvement of the nineteenth century was that of Richard Trevithick of England, who with Andrew Vivian patented in 1802 a steam carriage having a flywheel on the crankshaft and the latter connected with the driving wheels by gearing. This was the first steam vehicle with transmission gearing. The first

steam automobile having comfortable accommodation for passengers appears to have been that of Julius Griffiths, built in England in 1821.

During this period of invention a curious fallacy was commonly entertained—that ordinary wheels would not afford sufficient traction for progress and that some sort of mechanical legs were necessary. One carriage embodying this foot pushing idea was brought out in 1824 by David Gordon, and it received much attention. The carriage had wheels, but the work of the engine was to operate six hinged legs, with feet on the bottom of them, so that the carriage should be drawn by a six legged steam horse. It worked, too.

Soon after the close of the first quarter of the nineteenth century the interest in steam road carriages grew to impressive proportions in England, and it seemed for a time as if this type of vehicle was destined to permanent use and to revolutionize travel on the highways. In 1833 there were not less than twenty such vehicles in and around London and a dozen corporations had been organized to operate motor roadway lines over stated routes. That was the time when the automobilists of to-day who rant about prejudice and adverse legislation should have lived, for these were what chilled and killed the budding bloom of steam highway lines.

If the prejudices fighters of to-day could have beaten the hostility that existed in England about the middle of the nineteenth century the modern automobile might have arrived many years before it did. The senseless hostility in England to the motor coach was terrible. A hus and cry was raised by all classes. It was due in a large measure to what was then known as the turnpike corporations, which together with the stage line companies were the owners of thousands of horses.

The horse breeders foresaw the destruction of their business—or thought they did—if the steam carriages were allowed on the roads, and they cried aloud against them. The stage coach drivers thought they would be thrown out of work if the horse vehicles were banished, and the farmers joined the protest because if horses were replaced by steam they "never would be able to sell any more oats."

A great slogan of "down with machinery" was turned loose and the steam coaches were booed and stoned. Parliament was called upon and it responded with enactments that would have put an end to the most determined pioneers. Bills requiring excessive highway tolls were aimed directly at the steam carriages, and another blighting law was passed, of which there was a duplicate in New York State recently. This was the statute requiring a self-propelled vehicle to be preceded by a man carrying a red flag and walking. That was enough.

There was another influence at work against the automobile at this time in the form of the growing railroad interests. The investors in the railways were eager opponents to the steam road vehicles. At a critical time one of the biggest railroad enterprises paid a dividend, and that about settled the argument of motor rail cars versus motor road carriages. The most was made of this dividend declaration and the stockholders could see everything in the future for the railroad and nothing for the automobile.

For a decade or two the activity in the developing of the automobile ceased. The "locomotive act" of Great Britain, requiring the man to walk ahead with a flag, was a

sufficient deterrent to inventors in that kingdom, and when the activity was renewed it was in France. This was in the early seventies, and may be said to mark the beginning of the automobile era, for some of the men who then began to turn out experimental automobiles kept at it until in the eighties and nineties they had produced commercially practical vehicles, and several of their names are identified to-day with well known makes of motor cars.

Prominent among these is the name of Boile, who in 1873 turned out a steam carriage that would go. His nephew, Leon, is now at the head of a firm making gasoline cars. This was the general history—after the adoption of the Otto gas engine by the makers of steam automobiles began to make gasoline cars.

It is by no means to be inferred that American inventors were idle during this season of renewed activity in developing the automobile. Motor vehicles of merit were produced in the United States by so many different men that space prevents even the mention of the work of all of them, or their names. One notable invention was made in 1859, when J. K. Fisher of New York brought out a small steam carriage which made fifteen miles an hour.

The modern automobile period began about 1886, when the Daimler liquid hydrocarbon engine appeared in a form which held out some promise of success in the use of it for road vehicles. Not that the gasoline engine was new at this time, but the adaptation of it for motor cars was the object being sought. In this work, however, Daimler and the other Europeans were anticipated by an American, according to the historians, for in 1879 there was filed in the Patent Office at Washington an application for a vehicle with a liquid hydrocarbon engine of the compression type, having a transmission capable of being disconnected with the engine, the feature so necessary on all practical automobiles to-day.

This application was issued in 1895 as patent 549,180, being kept alive during the interim by amendments. Concerning this grant the patent commissioner in his official report for 1895 said that it was one "which may be considered the pioneer invention in the application of the compression gas engine to road or horseless carriage use." Following the adaptation of the compression and explosive engine, the work of development hinged upon carburetion, ignition, cooling and transmission, but the industry advanced by giant strides and leaps.

English inventors for a time remained shackled by the "locomotive act," but in France the steam carriage began to be adopted by the hydrocarbon, or gasoline, engine and about 1880 a number of French concerns were manufacturing under rights secured from the Germans, for the successful gas engine originated in Germany, although the adaptation of it in a practical way to road vehicles was first patented in America. Panhard and Levasor, De Dion, Amédée Bollée, Delahaye, Peugeot and De Dietrich are some of the names identified in France with the first successful cars, as were those of Winton, Riley, Knox, Haynes, Pope and the Electric Vehicle Company in this country.

It was in the late '90s that Alexander Winton made a successful trip from Cleveland to New York in a gasoline carriage, some time before enough cars could be gotten together to hold the first show here, which was in the fall of 1900. The Times-Herald race in Chicago, in 1905, brought out steam, electric and gasoline vehicles, and may be said to have been the first signal event that did much toward satisfying the doubting ones in this country of the practicability of automobiles and toward arousing public interest.

The runs of 1894, '95 and '96, from Paris

to other distant cities, sent the news around the world that the automobile had arrived and in 1898 the "locomotive act" in England was repealed, so that new life was infused into the British manufacturers. The American makers began themselves late in the nineties, but they were several years behind the Europeans, and instead of adopting the types in vogue abroad, they persisted for a few years in working out their own ideas, although these involved types which had been discovered abroad. One result of this, however, was that the horizontal engine said for a few years to be typical of American construction, was brought to a higher stage of development here than ever it was abroad.

In June, 1899, there were enough automobile enthusiasts in New York for the Automobile Club of America to be formed, and the first public parade of automobiles was held on November 4, of the same year. In January, 1900, a club run from New York to Ardley was attempted. Eight out of thirteen starters finally reached the destination, and most of these had a serious time of it.

Many can recall the style of vehicles seen at the first show. They were "near automobiles," in that they had motors, but in appearance they were shuffling buggies. Most of them had steam for motive power, even then, although the gasoline engine had begun to dominate abroad. In two years more the "horseless carriage" type began to disappear and two more years saw the runabout giving away to the touring car. From that time since the tendency has been ever toward more and more power, larger cars, more comfort, more elegance, and now the styles are making toward the luxurious very rapidly.

Generally speaking, the pleasure vehicle has been developed to the neglect of the commercial motor wagon. The demand for the pleasure cars was so great, the problems presented by them so well in hand, and the profit offered so much more, that the majority of the most capable designers and engineers have confined their attention to them, so that one of the greatest developments of the future is undoubtedly to be the working out, to an economical practicability, of motor wagons and trucks. Then will the original automobile yearning, calling for the abolition of animals for draught purposes, be fulfilled.

Even those who were most sceptical a few years ago have now little doubt but that the motor vehicle is to work many transformations in the next two decades. It probably will be seen in forms not even fancied at present. The other things that will make the future of the automobile probable are these: It will clean the streets clean. It will rush fresh produce and eggs and milk from the farm to market, and in many ways raise the average of health and the standard of comfort. It will be converted into formidable machines of destruction for armies and will make war more remote by making it more dreadful. It will fill an important place in agriculture and develop highways until it becomes a keen rival of the railroad in handling freight, and yet remain an ally to them.

It will not only bring the town and country closer together, but will develop suburbs for residence sections, and it is quite likely that it will to some extent follow the history of the bicycle, and after being the rich man's toy become the necessity of the workingman. It is not possible for it ever to be as cheaply built as the bicycle, but unquestionably small, cheap forms of it will be developed, that will put it within the reach of a salesman's salary, and the cost of operation also will decrease. Where it will end is, after all, much harder to conjecture than it is to get a fair knowledge of where it began.

### FARMERS WANT MOTOR TRACTOR.

Gasoline Driven Machines Best for Agricultural Work.

Although the importance of the universal commercial vehicle, as it may be termed, that is to say the machine that is capable of being applied to the uses of the portable power plant as well as the tractor and automobile vehicle, has been held before the industry for several years, surprisingly little has been accomplished in this country in the way of satisfying what is acknowledged to be a growing demand, says the Motor World. In the great Northwest there is considerable use of traction engines of the massive steam type, yet in many ways they are too cumbersome or too expensive to be of effective service. Hence the opening for the lighter and more mobile gasoline vehicle is an especially promising one. Moreover it is one to which the makers of gasoline propelled vehicles of other types well may turn their attention.

Form western Canada agricultural implement dealers are reporting a strong demand, positively expressed, for a gasoline traction engine which can be used for ploughing, threshing and stationary use as well as traction. The demand for a suitable machine for ploughing is especially strong, and it is stated that any machine which is dependable for this sort of work can be relied upon for either of the others.

The fuel question is a more important bearing on the matter than might at first be supposed, especially in localities where custom threshing and ploughing is done. In such cases it is the rule for the farmer to furnish the fuel for the steam engines which are commonly used. This demands the constant work of one or two men aside from those actively engaged in operating the machine, and as the farmer himself must furnish his board the expense is of a considerable where a great amount of work is done.

With a gasoline machine it is pointed out that a single attendant can look after the entire plant, take on fuel enough for a day's work in a few minutes and at the same time keep the mechanism in good running condition. This also means a considerable saving in wages to the owner of the plant, totally apart from the added economy of the gasoline machinery, so that from all points of view the introduction of the gasoline tractor to the farmer would be attended with marked advantages.

As to the probable cost of ploughing with gasoline power, it has been estimated that an engine with a gang of ten ploughs with 12 inch bottoms, travelling two miles an hour or better, would turn over two and a half acres every hour, or twenty-five acres in a day of ten hours. But to be general there should be allowed, say, one-fifth of the time for turning around at the ends and for loss in time otherwise, which will cut the number of acres ploughed to twenty instead of twenty-five.

The fuel consumption for this work will not exceed thirty-five gallons of gasoline, which will cost at 15 cents a gallon \$5.25, at 20 cents a gallon, \$7. Add to this two men's wages at \$1.50 each, and the actual cost, with gasoline at 15 cents a gallon, is \$2.25 for ploughing twenty acres, or 41 cents an acre. If gasoline is 20 cents a gallon, the cost will be \$10, or 50 cents an acre.

On the other hand, it will keep one man and a team busy to plough two and a half acres in ten hours. A team and man are rated as worth \$1 a day everywhere. Consequently it will cost \$2.20 to break up an acre of land with man and team, against 50 cents an acre with a gasoline traction engine.